

HOT-ROLLING METHOD FOR CONTINUOUSLY CAST SLAB FOR GRAIN ORIENTED ELECTRICAL STEEL SHEET

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Abstract of JP6017130

PURPOSE: To obtain a product without bulged defect on the surface by specifying large spreading rolling reduction rolling condition after preheating a slab and the successive heating temp. in an electric heating furnace in non-oxidizing gas atmosphere.

CONSTITUTION: After preheating the slab for grain oriented electrical steel sheet containing 0.02-0.085% C, 1.2-4.5% Si and produced by continuous casting, the large spreading rolling reduction rolling of $\geq 60\text{mm}$ is executed with a gas combustion heating furnace at 900-1250 deg.C.

Successively, after heating at high temp. and soaking with the electric heating furnace in the non-oxidizing gas atmosphere, hot-rolling is executed. In this case, ≥ 3 passes of the large spreading rolling are executed at $\geq 50\text{mm}$ rolling reduction for each pass. Thereafter, the rolling with reduction of 10-40% in thickness in the vertical direction is carried out at the temp 900-1100 deg.C in the center of the slab, and this rolling is executed for ≥ 2 passes and the rolling reduction in the vertical direction of the finish pass is made to be $\geq 60\%$ of the total draft in this process. Then, after heating in the electric heating furnace in the non-oxidizing gas atmosphere at 1300-1450 deg.C, the rough rolling and the finish rolling are executed.

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